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ABSTRACT

Some educators, especially those engaged in minority studies, are historically disenchanted with textbooks. They have sought alternative sources of information in multimedia. To test the effectiveness of a multimedia approach to change students' attitudes and increase factual knowledge, the Lawrence, Kansas, schools designed an experiment to compare learning in two sample groups, one using a textbook approach for a six-week unit on ethnic studies and the other using a multimedia approach. Pre- and posttest results showed no significant differences in cognitive and effective learning between the two samples. This monograph consists of four parts: (1) a history of minority dissatisfaction with textbooks and instructional media; (2) a description of the methodology used in the Lawrence experiment; (3) results of the experiment; and (4) an appendix of the measurement tools used in the study. (EMH)

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Media Use in the Study of Minorities

BY

MARJORIE SULLIVAN

and

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Papers published in this periodical are written by faculty members of the Emporia Kansas State College and by either undergraduate or graduate students whose studies are conducted in residence under the supervision of a faculty member of the college.

Preface

The researchers appreciate the assistance of all those who have contributed to this study. They wish to acknowledge the considerable contribution of Ms. Martha Pankratz and Ms. Lila Friedli, students who designed and pre-tested the measuring instrument, and Ms. Reggie Betzen, Ms. Cecelia Timberlake, and Sr. Joan Taylor, students who compiled the consideration file of library media.

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Finally, they want to express their thanks to Dr. Ray Heath at Emporia Kansas State College, who assisted with the statistical analyses.

July 1, 1975 J.S.G.
Emporia, Kansas M.S.

Media Use in the Study of Minorities

by

Marjorie Sullivan and John S. Goodell *

I

INTRODUCTION

One of the recent trends in American society has been a growing awareness of minority groups and their problems which has developed in non-minority individuals as well as in members of such groups. For minority members, an awareness of their own identity has led to an increased pride in their various ethnic backgrounds. For the majority, this developing awareness has meant a growing appreciation of their fellow citizens and a broadening outlook on life in general. Along with these personal feelings, there has been an increased awareness of the problems faced by minority groups, often relating to socio-economic conditions which lead to cultural and economic deprivation; hence, we speak of the underprivileged, the culturally deprived, the educationally deprived, the economically disadvantaged, or simply the disadvantaged. Although members of these groups may not come from ethnic minorities, they often do, and there is a tendency to associate these conditions with ethnic minorities.

Study of the Disadvantaged

There has been a number of approaches designed to assist disadvantaged individuals, one being the study of minority groups in formal educational settings. The underlying assumption seems to be that knowledge of the cultural contributions of these groups will lead to improved conditions for minorities and to benefits for society at large. Minority members, ideally, will gain in self-esteem and in acceptance by the majority, but still be able to retain their distinctive ethnic heritage. Those from the majority background, on the other hand, will profit by becoming more tolerant and by developing an appreciation for other cultures. Ultimately, minority studies should lead to more cooperation among groups to the benefit of all.

The thousands of educational programs designed to uplift culturally disadvantaged minorities in the fifties and sixties, however, exerted marginal impact. Experimentation and research in the seventies must discover proper mixes of economic, social, and educational strategies if

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the disadvantaged are to increase their social mobility. While changes in education alone offer no panacea, such reforms are requisite if deprived minority members are to experience success in school and in later life.[1] Today, however, large segments of the population may be designated as being deprived: minorities, socio-economically deprived, and the majority who lack understanding of self, of others, and of the relationship of others' welfare to their own.[2] Funding the acquisition of library resources on the basis of relative need, Title II of the Elementary and Secondary Education Act promised benefits for disadvantaged and advantaged.[3] Title II ESEA was designed to foster innovation, experimentation, and research upon which to base future programs. In the American tradition of universial education, this act sought to prepare the young for full citizen participation in the democratic society.

Popular Education in Early America

The father of popular education, Horace Mann, laid the basis for common schooling in the United States when he and his fellow workers in Massachusetts established state and locally supported schools for every child regardless of creed, class, and background. In the warm associations of childhood, Mann saw the opportunity to kindle a spirit of amity and respect which the conflicts of adult life could never destroy. His common schools became the foundations of universal education in the nation.[4] As yet, however, Mann's vision remains unrealized. A present-day educator, Robert J. Havighurst,[5] has referred to the current challenge of providing appropriately for members of the various racial, religious, and national groups to achieve democracy within a pattern of diversity. According to educational policy, those groups which wish to forget the past and to become an indistinguishable part of modern America would be encouraged to do so through education. At the same time, those wishing to retain their historical and cultural traditions and live in harmony but distinct from other groups also would be encouraged to do so.[6]

Some citizens of these United States have first encountered unassimilated minorities on the pages of works describing newly arrived European immigrants. Mary Antin, in *The Promised Land*,[7] related the story of her Russian Polish family and her initiation to the opportuni-

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[1] S. M. Miller and Pamela Roby, "Educational Strategies and the Disadvantaged: An Overview," *Opening Opportunities for Disadvantaged Learners* (Work Conference on Urban Education), p. 64.

[2] Mario D. Fantini and Gerald Weinstein, *The Disadvantaged: Challenge to Education*, pp. 9-12.

[3] *Elementary and Secondary Education Act of 1965: Senate Report No. 146*, p. 21.

[4] Lawrence A. Cremin, "Popular Schooling," *Talk on American Education*, pp. 13-23.

[5] Robert J. Havighurst, "The Broad Purposes of Education," *Talk on American Education*, pp. 13-23.

[6] Havighurst, p. 21.

[7] Mary Antin, *The Promised Land*.

ties of public schools. Jacob Riis, from Denmark, wrote about Italians, Bohemians, Germans, Irish, and colored "mingling without the least friction" in schools established and managed by the Children's Aid Society, a coordinate branch of New York Public school system. [8] Jane Addams, founder of Chicago's famed Hull House, wrote about the "value and function of each member of the community, however humble he may be." [9]

Developing Concern for the Unequal

After the turn of the last century, white European immigrants were blending to form the American stock, but non-white minorities remained, for the most part, separate and unequal. Anticipating a brave new post-World War II society in which common schools would support a democratic nation, the Educational Policies Commission declared in 1944 that there must be no exclusions on the basis of caste, cultural, linguistic, or religious backgrounds of children, who shared common qualities. [10] Ten years later, Brown vs. Board of Education, initiated in Topeka, Kansas, [11] struck down the legal inequities in the education of the Negro and laid the foundation for an attack on segregated schools. Mid-century also witnessed the "Great Appraisal of Education" in which Caswell acknowledged that the development of a twelve-year program of education adapted to the needs and capacities of all children and youth was a tremendously difficult undertaking. [12] Later, in the fifties, Conant concluded from his study of American public education that the comprehensive high school serving all youth of the community was typical. [13] He attributed this development to our economic history and to our devotion to the ideals of opportunity and equality of status.

Especially after 1920, authors of poetry and fiction who were themselves members of ethnic minorities appealed to the sympathies of other Americans – Richard Wright, Langston Hughes, Ralph Ellison, James Baldwin, Margaret Walker, and Gwendolyn Brooks. During the late sixties, and early seventies, Americans were stirred by a medley of voices – N. Scott Momaday, [14] Eldridge Cleaver, [15] Peri Thomas, [16] and Stan Steiner, [17] to mention a representative few. They and their fellow writers expressed not only the frustration of submerged minorities, but also their beliefs in a better future. With Martin Luther King, Jr.,

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[8] Jacob A. Riis, "Children of the Poor," *The Poor in Great Cities*, pp. 96-95.

[9] Jane Adams, *Democracy and Social Ethics*, p. 178.

[10] *Education for All American Youth* (Educational Policies Commission), pp. 16-19.

[11] Brown vs. Board of Education 347 U. S. 483 (1954).

[12] Hollis L. Caswell, "The Great Appraisal of American Education, *Teachers College Record*, LIV (1952-1953), 12-22.

[13] James B. Conant, *The American High School Today*.

[14] N. Scott Momaday, *House Made of Dawn*.

[15] Eldridge Cleaver, *Soul on Ice*.

[16] Peri Thomas, *Down These Mean Streets*.

[17] Stan Steiner, *La Raza: The Mexican-Americans*.

they said, "I have a dream." It was in this same decade that several influences focused attention sharply upon rural and urban poor, including the ethnic minorities drawn to the cities where social ills festered: e.g., the civil rights movement, with its emphasis on social and economic inequalities; the relatively high rate of unemployment among youthful, urban blacks; the high rate of rejection of Negro youth by Selective Service; and the contrast of poverty with prevailing affluence in the society.

Two documents underscored the frustrations and powerlessness of the impoverished black living in a racist society. The National Commission on Civil Disorders in 1968 estimated that 16,300,000 Americans were educationally disadvantaged, a disproportionate number probably Negroes.[18] Census data had previously established that 36.9% of Negroes over 25 years of age and 14.8% of whites were functionally illiterate. This commission also recommended ameliorative measures in the areas of employment, education, welfare, and housing, suggesting a wide range of programs to improve the quality of ghetto education, recommending expanded experimentation, evaluation, and research, and proposing that the Elementary-Secondary Education Act (ESEA) be amended to require recipient school systems to undertake a thorough evaluation of their compensatory education efforts as a condition to receiving ESEA funds.[19] The National Commission on the Causes and Preventaion of Violence cited similar causes:

> To be a young poor male; to be under-educated and with no means of escape from an oppressive urban environment; to want what the society says is available (but mostly to others); to see around oneself illegitimate and often violent methods being used to achieve material gain; and to observe others using these means with impunity – all this is to be burdened with an enormous set of influences that pull many toward crime and delinquency. To also be a Negro, Puerto Rican or Mexican-American and subject to discrimination and segregation adds considerably to the pull of these other criminogenic forces.[20]

Education as a Remedy

Goldstein has pointed out that education was seen as the major obstacle to, as well as the principal vehicle for, integrating into American life those stigmatized by poverty.[21] It became increasingly apparent that, to provide appropriate programs, education must deal "with ever lower levels or ever wider circles of people."[22] While everyone is a

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[18] *Report of the National Advisory Commission on Civil Disorders*, p. 248.

[19] *Report of the National Advisory Commission on Civil Disorders*, p. 249.

[20] *To Establish Justice, To Insure Domestic Tranquility* (U. S. National Commission on the Causes and Prevention of Violence), pp. xxi-xxii.

[21] Bernard Goldstein, *Low Income Youth in Urban Areas: a Critical Review of the Literature*, p. iii.

[22] Abraham Bernstein, *The Education of Urban Populations*, p. 29.

member of one of more minorities, some are "more minority" than others, i.e., more deprived. America has an unsavory record of vicious dealings with deprived minorities. Central to American thinking today, however, is the goal of ending fragmentation, to do so through education.[23] Bernstein advocated Educare, which would allow Americans to participate in society and in themselves, especially those minority members who need to learn how to participate.[24]

In its broad policy statement on innovative education in 1968, the Committee for Economic Development delineated as the most pervasive problem the need to improve instructional techniques.[25] Such improvement, they contended, was the pre-condition for achieving better education for all – for those from poor as well as from affluent families, for the culturally deprived as well as the advantaged.[26] Population experts have predicted that in a few years 80% of all Americans will live in urban areas and will need education with an urban orientation. Until recently, citizens generally have been unaware of this need in addition to a broader requirement:

> If we Americans have been more engrossed with our excesses than with the rising expectations of the underprivileged peoples of the globe, it is because our education programs have not prepared us to be so enlightened that we recognize the interdependence of all people and the enjoyment that is derived from the humanitarian spirit.[27]

Havighurst has identified and located four rural sub-cultures of poverty: white Anglo-Saxons living in Appalachia and the Ozarks; Spanish Americans residing in the Southwest; Negroes living on small farms in the South; and American Indians distributed throughout the country but concentrated in the Southwest.[28] For Havighurst, *poverty* is a convenient term used to identify disadvantaged groups in a wealthy society. Riessman has considered *culturally deprived, educationally deprived, deprived, underprivileged, disadvantaged, lower class, lower economic group*, and allied terms to be synonymous.[29] McKendall has added that "cultural disadvantage" is an all-purpose phrase referring "to the variety of social, economic, and ethnic-interracial factors which impede full freedom of choice and which destroy the individual's right to maximum opportunity."[30]

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[23] Bernstein, p. 313.

[24] Bernstein, pp. 313-320.

[25] CED (Committee for Economic Development), *Innovation in Education: New Directions for American Schools*.

[26] SED, p. 11.

[27] J. A. Battle, *Culture and Education for the Contemporary World*, pp. 257-258.

[28] Robert J. Havighurst, "The Faces of Rural Poverty," *Education of the Culturally Disadvantaged* (proceedings of the National Conference on Educational Objectives for the Culturally Disadvantaged, South Central Regional Educational Laboratory), p. 1.

[29] Frank Riessman, *The Culturally Deprived Child*, p. 6.

[30] B. McKendall, "Breaking the Barriers of Cultural Disadvantage," *Phi Delta Kappa*, XLVI (1965), 307.

The cluster of labels applied to minorities by professionals supplies bigots, eager to gloss over human diversity, with handy stereotypes. Essentially derogative, these terms fail to mention strengths present in disadvanted persons. As Miller has warned, these sweeping descriptive generalizations also lack the precision required for ameliorative measures.[31] In addition, Fantini and Weinstein[32] have pointed out that, while our focus of attention is currently devoted to the disadvantaged of the lower socio-economic groups, the symptoms of middle class disadvantage are becoming increasingly evident:

> The very institutions we have established to perpetuate our democratic society . . . will surely fall short of their purposes unless the people who administer and operate them are themselves fully educated, thinking adults. Our attempts to improve the lot of the poor . . . can amount to little more than an expensive waste of public and private funds unless these attempts stem from an encompassing and realistic approach to the assets as well as to the problems of the disadvantaged. Yet, surely we cannot expect such an approach as long as middle class individuals . . . are themselves deprived of the full benefits of an educational process which prepares them for their personal and social roles.[33]

Toward a Nationwide Effort

Mid-century Chicago University spawned a series of studies probing the oppressive rigidities of the class structure. Three classic studies of human development pointed the way for similar research and provided the foundation for future investigations of minority groups: *Who Shall Be Educated?*[34] (1944) found that the teachers, administrators, school boards, and students functioned to keep people in their places; *Elmtown's Youth*[35] (1949) examined the impact of social class on adolescents in a cornbelt community; and *Growing Up in River City*[36] (1963) investigated the chief formative influences on growing up in a midwestern community. Ethnic minorities were absent from these studies, with one exception: *Who Shall Be Educated?* exposed the disadvantages of being Negro in the educational system.

In 1967, Goldstein surveyed sociological research about low income youth in urban areas.[37] Of the fifty-four studies concerning their education, twenty-four yielded information concerning ethnic minorities.

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[31] S. M. Miller, "The American Lower Class: A Topological Approach," *Social Research*, XXXI (1968), 2.

[32] Fantini and Weinstein, p. 37.

[33] Fantini and Weinstein, pp. 38-39.

[34] William L. Warner, Robert J. Havighurst, and Martin B. Loeb, *Who Shall Be Educated?*

[35] August B. Hollingshead, *Elmtown's Youth: The Impact of Social Class on Adolescents.*

[36] Robert J. Havighurst and Others, *Growing Up in River City.*

[37] Goldstein, "Annotated References for Chapter Two," pp. 160-210.

Two of these originated in 1940's, six in the 1950's, and sixteen between 1960 and 1967. With one exception, all findings about minorities concerned Negroes. Generally, these studies related background factors to the learning process, to educational aspirations and achievements, to patterns of retention and dropping out, as well as to psychological characteristics. Moreover, in 1967, Bernstein, [38] the advocate of Educare, declared that he would accompany each urban education program with a team of researchers, not only to provide for assessment but also to transform teaching and administration into inquiry.

By far the most extensive and most controversial study of minority education was published by the U.S. Office of Education in 1966. Instigated by the Congress as part of the Civil Rights Act of 1964, *Equality of Educational Opportunity* describes statistically the extent of educational opportunities which existed throughout the country for minority groups as compared to those which obtained for the white majority. [39] This project involved some 60,000 teachers and 645,000 pupils in 4,000 schools in the United States and its territories. For all practical purposes, American schools were found to be segregated; in addition, opportunities for minority children were inferior, and minority children were most affected by the quality of their schools. Teacher quality seemed significantly more important to the disadvantaged than to the advantaged boy or girl, but the disadvantaged seemed to draw the least qualified teachers. The disadvantaged entered school, handicapped by a combination of nonschool factors, and felt little control over their own success or failure. Schools failed to narrow the initial gap between the advantaged and the disadvantaged; instead, the spread widened. School integration benefited the education of minority children without harming the schooling of majority children.

In 1966, Harold Howe, U.S. Commissioner of Education, addressed the National Conference on the Disadvantaged, sponsored by Title I of the Elementary and Secondary Education Act. [40] He hailed the aforementioned study, popularly referred to as the Coleman Report, as a new benchmark for education, and invited those present to "challenge the survey, hypothesize from it, learn from it." Speaking to the same audience, Hubert Humphrey, then Vice-President of the United States, referred to numerous programs serving the disadvantaged and praised ESEA, claiming that "it presents to the schools the magnificent opportunity of playing an active rather than a passive part in the continuing task of perfecting American democracy." [41]

Miller and Roby have lauded the intent of ESEA to distribute federal funds so as to benefit the poor more than the non-poor. [42] Their

[38] Bernstein, pp. 313-319.

[39] *Equality of Educational Opportunity* (U. S. Department of Health, Education, and Welfare, Office of Education).

[40] Title I, ESEA, *National Conference on Educational of the Disadvantaged* (U. S. Department of Health, Education, and Welfare, Office of Education), p. 67.

[41] Title I, ESEA, pp. 55-56.

[42] Miller and Roby, p. 58.

survey of programs designed to improve the education of minority students during the 1950's and the early 1960's revealed five basic strategies to improve performance: changing the student and the family, changing the school, increasing resources and changing their distribution, changing the student composition, and changing control.[42] They concluded that, to increase educational attainment of low-income youth, we must couple educational strategies with social and economic strategies; that, since we do not know the proper mix of those strategies, we must experiment; and that until we perfect the educational system as a meritocratic sorting mechanism, we must provide alternate means of making it in the occupational world."

The Economic Opportunity Act and Title III of the National Defense Education Act, which predated ESEA, benefited disadvantaged students only incidentally. Beginning in 1965, school libraries received grants for compensatory (ESEA Title I) programs and for instructional materials (ESEA Title II). ESEA attempted to improve educational opportunities for youth by "increasing resources and changing their distribution."[43] Investigating the effects of Title I programs on poor children in 1968, Frary concluded that statements about school library services to the disadvantaged applied equally to those for any other student: The problems differ in timing and emphasis and the amount of compensation needed to insure the possibility that all young people will become reasonably happy, educated, and contributing members of a multi-ethnic, technological society."[44]

If formal education programs are to be used to reduce the distance between minorities and the majority, questions arise regarding the most effective method of transmitting knowledge about and modifying attitudes toward minorities. Futhermore, there are questions concerning the role of the school media center and its resources. Will a variety of media employed in classroom teaching and learning be more effective than the traditional textbook approach in conveying knowledge about and in changing attitudes toward minorities? Will access to selected library media signiticantly affect cognitive and affective learning about minorities? This present study attempts to answer these and related questions.

Statement of the Problem

The purpose of this study was to examine the effects of media on the affective and cognitive learning of ninth graders studying cultural minorities in the United States. The main aspect investigated was the effect of a variety of selected media on learning in the classroom and the library media center.

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[42] Miller and Roby, p. 49.
[44] Miller and Roby, p. 64.
[43] Miller and Roby, p. 49.
[44] *How ESEA Title II Meets the Educational Needs of Poor Children* (U. S. Department of Health, Education, and Welfare, Office of Education), p. 414.

Four specific research questions were formulated to guide the study:

1. Is there a significant difference in cognitive and affective learning between students using multimedia and those using textbooks in the classroom study of minorities?

2. Does sex significantly affect cognitive and affective learning of students using multimedia and those using textbooks to study minorities?

3. Does ethnic background significantly affect cognitive and affective learning of students using multimedia and those using textbooks to study minorities?

4. Does library use as measured by the number of visits, the reasons for visits, and the types of materials used significantly affect cognitive and affective learning of students using multimedia and those using textbooks to study minorities?

II

REVIEW OF THE LITERATURE

As minority studies entered the curriculum in the sixties, citizens and educators criticized textbooks and became interested in alternative educational media. Developing slowly earlier in this century, instructional media and accompanying research gained impetus after World War II. A comprehensive study of educational technology published in 1970 found nonprint media use in schools and colleges to be low in quantity and quality and recommended federal leadership and funding.[47] Educators have attributed special values to the newer media, especially for the disadvantaged. Furthermore, ESEA Title II funds, distributed on the basis of relative need, provided materials for both the advantaged and the disadvantaged. However, the school media center, which actively supports the learner's search for answers, has yet to prove conclusively its effectiveness.

Dissatisfaction with Textbooks

It was during the sixties that educators interjected minorities into the curriculum in the form of minority classroom units, minority classroom units, minority courses of study, and planned sequences of units on successive grade levels. Some teachers integrated minority materials into historical survey courses. Others set up seminars of supervised independent study. Still others involved students in community study or engaged them in educational games. In short, the variety of teaching-learning strategies was rich.

Early in this same decade, citizens cast a critical eye on textbook treatment of minorities. On the one hand, the National Association for the Advancement of Colored People successfully pressured the Detroit (Michigan) Board of Education to remove *Our United States*, a history text for seventh and eighth graders, alleged to be "an insult to every Negro in Detroit" and capable of laying "foundations for future community problems." On the other hand, Californians protested that the text, *Land of the Free*, was "too favorable to minority groups."[48] In 1971, a task force appointed by the California State Board of Education to investigate social studies texts for grades 5-8 approved some, discarded or modified others, and advocated that children of all races be granted the opportunity to study and appreciate their own culture.[49]

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[47] *To Improve Learning, A Report to the President and Congress* (U. S. House of Representatives, Committee on Education and Labor, Commission on Educational Technology).

[48] Juanita Roderick, "Minority Groups in Textbooks," *Improving College and University Teaching*, XVIII (Spring, 1970), 130.

[49] Kenneth S. Washington and Others, *Task Force to Re-Evaluate Social Science Textbooks Grades Five through Eight*, p. 13.

To update a 1961 study by the Anti-Defamation League, Michael B. Kane in 1970 examined 45 leading texts widely used in junior and senior high school social studies.[30] He discovered some genuine improvement but concluded that no single book provided an adequate presentation.[31] For example, references to American Indians were omitted, and existing accounts gave inaccurate appraisals of their current status. Portrayals of the noble savage, however, had been supplanted by recitals of the injustices and deceits endured by the Indians and the contributions of their culture.[32] Moreover, in social science textbooks, Mexican-Americans had replaced Negroes as the "invisible Americans."[33] As a consequence, Kane called for accurate presentations of minorities reflecting our dynamic, pluralistics society and its development, and added that, if textbooks failed in this function, teachers should use other materials, not to supplement texts but to supplant them.[34]

In 1970, the Indian Historical Society published *Textbooks and the American Indian*, a critique by thirty-two Indians scholars, native historians, and Indian students.[35] Not one of the three hundred works examined provided dependable knowledge concerning the history and culture of American Indians. Most were derogatory of Native Americans. Most also contained misinformation, distortion, or omissions.[36] Yet, our textbooks, the basic materials of instruction, have defined the content of American history in our schools. New methods, new concepts, discovery or inquiry approaches, and the new media will improve learning only if new content exists for learning materials to implement the innovative methodologies.[37]

Jack D. Forbes, author of *Mexican-Americans: a Handbook for Educators*, distinguishes between the "culturally different" and the "culturally disadvantaged" pupil and asserts that, in creating the latter, we have disadvantaged *all students*.[38] His handbook describes teaching methods and lists resources which would tap the 6,000-year-old culture, which was diffused northward by Mexican-Americans.[39]

Ready to abandon textbooks for more stimulating fare, Dyson contends that if American texts are balanced, they are labelled bland or inconsistent; if they are not, they are accused of bias.[40] To surmount

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[30] Michael B. Kane, *Minorities in Textbooks*.

[31] Kane, p. 130.

[32] Kane, pp. 140-141.

[33] Kane, p. 141.

[34] Kane, p. 143.

[35] Jeanette Henry, *Textbooks and the American Indian*.

[36] Henry, p. 11.

[37] Henry, p. 243. For accurate sources about Indians, see June Smeck Smith, "Library Services to Indians," *Library Trends*, XX (October, 1971), 227. For ethnic materials generally, see American Association of School Libraries on Treatment of Minorities in Library Books and Other Instructional Materials, "Multi-ethnic Media: Selected Bibliographies I, II, III," School Libraries, XIX (Winter, 1970), 49-57.

[38] Jack D. Forbest, *Mexican-Americans: a Handbooks for Educators*.

[39] Forbes, pp. 12-13.

[40] Allan J. Dyson, "Ripping Off Young Minds: Textbooks, Propaganda, and Librarians," *Wilson Library Bulletin*, XLVI (November, 1971), 260-267.

this dilemma, he would change the approach to social studies. To cultivate the flexible, ever-learning, problem-solving sort of man, he would turn away from the fact-laden curriculum geared to the textbook.

While citizens and scholars were decrying the deficiencies of social studies textbooks, Massachusetts teachers in 1964 were already engaged in innovative minority studies requiring a variety of media. Descriptions of their programs and listings of media appeared in *Minorities in Curriculum: What's Happening Where*, prepared for a conference in Nitick, Massachusetts, in 1969.[61] This impressive compendium of resources from Massachusetts classrooms indicates the strength and variety at that time in minority education programs and evidences a growing tendency to integrate print and nonprint media into classroom units utilizing student inquiry.

Interest in Educational Technology

Travers had pointed out earlier that the American education system could be "viewed as a relatively primitive or underdeveloped, nontechnological folk culture – technologically isolated from the more sophisticated culture of industry, business, the military, and the scientific."[62] Slow to develop early in this century, instructional technology gained impetus after its immeasurable contribution to World War II training programs and regained its momentum with the launching of the Russian satellite Sputnik in 1957 and the subsequent exploration of space which emphasized the need to master information rapidly.[63]

Initial research in educational media (1918-1945) was devoted to instructional and theatrical film and to instructional radio.[64] However, the years between 1945 and 1965 saw intensive research in instructional media, much of it related to a growing concern with the response of education to social changes prompted by technological advances. Decisions to restructure disciplines, to improve instruction, and to improve teacher preparation were tied to questions about what to teach to whom and how to teach it in less time. Simultaneously, new media formats and modes of presentation developed and the systems' approach raised questions about selecting and combining media for effective use.[65]

In 1970, the Commission on Educational Technology published *To Improve Learning*.[66] Their year-long study investigated the status of audiovisual media, television and radio, programmed instruction, language laboratories, the computer, dial access, and games and simulation. Generally, instructional technology in American education was

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[61] Patricia R. Allen and Rita E. Weathersby, *Minorities in the Curriculum: What's Happening Where; an Informal Survey of Programs and Resources in Massachusetts*.

[62] Robert M. W. Travers, "A Study of the Relationship of Psychological Research to Educational Practice Practice," *Training, Research, and Education*, pp. 525-538.

[63] F. Dean McClusky, "Introduction," *A History of Instructional Technology*, pp. 78-82.

[64] Paul Saettler, *A History of Instructional Technology*, pp. 285-318.

[65] Saettler, pp. 319-320.

found to be low in both quantity and quality. To make education more productive, more individual, more powerful, more immediate, and more equal, the Commission recommended federal leadership and funding. For the poor and minority groups, the newer media could provide a powerful tool, acting as a corrective to counter over-verbalism and relating education to students' out-of-school life.

Because the newer media record aural and visual images to simulate reality at the level closer to direct experience than the abstract symbolization of the printed word, educators have claimed for them peculiar educational values. For the culturally deprived child, Taba would capitialize on materials and tasks that use the operational and concrete to develop mental structures needed later for understanding symbolic presentations in books.[67] Morlan has asserted that the disadvantaged child, like all children, approaches learning through things he can see, hear, feel, and otherwise experience in as a direct a way as possible – in other words, through sensory experience of all kinds.[68] To provide multisensory experience, he would provide a wealth of educational media.[69]

Blank has noted that, paradoxically, the very same technology which acts as a partial determinant of the plight of the deprived may enable education to reap benefits that can contribute to breaking the spiral of deprivation.[70] He gives attention to preventive, diagnostic, and therapeutic values, emphasizing the key role of the skilled teacher who must restructure the learning environment.

With the passage of ESEA, some teachers of the disadvantaged had available, for the first time, sufficient and appropriate media – films, flimstrips, slides, tapes, records, manipulative materials, charts, maps, globes, and other sensory materials as well as textbooks.[71] A few theories existed, but there were no blueprints to guide practice.[72] Goldberg pointed out the urgent need for research:

> . . . we must learn what works, for whom, and under what conditions. Without this knowledge we will be floundering, jumping from one approach to another, proliferating, as we are now doing, programs and services about whose efficiency and effectiveness we know little.[73]

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[66] U. S. Congress, House, *Learning*.

[67] Hilda Taba and Deborah Elkins, *Teaching Strategies for the Culturally Disadvantaged*, p. 15.

[68] John Morlan, "Multisensory Learning," *Teaching the Disadvantaged Child*, p. 20.

[69] Morlan, p. 23.

[70] Gordon C. Blank, "Media in Programs for the Economically and Culturally Deprived," *Instructional Process and Media Innovation*, pp. 271?-279.

[71] Morlan, p. 22.

[72] William C. Kvaraceus, "Advantaging the Disadvantaged in the Secondary School: Some Problems and Guiding Practices," *Education of the Disadvantaged*, pp. 183-204.

[73] Mirian L. Goldberg, "Methods and Materials for Educating Disadvantaged Youth," *Education of the Disadvantaged*, p. 296.

Learning with Media

Library resources funded by ESEA Title II supported the new educational emphasis on learning rather than on teaching. Individualized instruction, self-directed learning, multimedia approaches, team teaching, and the like focused on the learner. Responding to this trend, the school media center, actively engaged in the learning process, began to supersede the traditional school library seen as only a book repository.[14] To provide the multimedia services required by learners, the 1969 *Standards for School Media Programs* was issued jointly by the Department of Audiovisual Instruction and the American Association of School Librarians.[15] These two organizations joined again to issue the 1975 *Media Programs: District and School.*[16]

In the seventies, some social studies teachers are not involving students in inquiry requiring a variety of materials. In these instances, teacher and students turn to the librarian, an innovator who introduces them to new materials, a consultant who assists them in choosing from available media, an expediter to speed access, and a teacher involved in the teaching-learning process.[17] Generally, however, media play a marginal role in the educative process rather than serve as major components. There is little hard data to show that the school media centers are any more effective than their predecessors, the school libraries. Despite this paucity of firm evidence, the literature does yield an impressive array of findings concerning schools with well-equipped and well-staffed media centers.[18]

The most extensive and widely publicized school library project of the past decade (1963-1968) was sponsored by the American Library Association and financed by the Knapp Foundation of North Carolina.[19] Eight school libraries were selected "to demonstrate the educational value of school library programs, services, and resources which fully meet the national standards for school libraries." Evaluation, determined by each of the participating schools, included "testing students' study skills, questionnaires of teacher attitude, and reactionnaires for parents." Because demonstration claimed top priority, research was relegated to a secondary position. As a result, the Knapp Project yielded considerable information but none precise enough to establish the effectiveness of library materials and services.

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[14] *The Education Professions 1971-1972, Part IV, A Manpower Survey of the School Library Media Field* (U. S. Department of Health, Education, and Welfare, Office of Education), p. 8.

[15] *Standards for School Media Programs* (American Association of School Librarians and the Department of Audiovisual Instruction).

[16] *Media Programs: District and School* (American Association of School Librarians and the Association for Educational and Communication Technology).

[17] Groomer B. Davis, "Partners for Progress: Social Studies and the School Library," *Wisconsin Library Bulletin*, LXVI (September, 1970), 334.

[18] *The Education Professions . . .*, p. 9.

[19] *Realization: the Final Report of the Knapp-School Libraries Project* (American Association of School Librarians).

A comparison of academic achievement of elementary level children with and without centralized school libraries supported the idea that those with a center manned by a professional staff would excel measurably in reading ability, library/research skills, and the amount of library activity.[50] Slow learners in kindergarten, primary, and intermediate grades increased cognitive skills, interest in school, and discussion skills through self-motivating media. Similar findings for children with normal learning rates were also reported.[51] In St. Louis, highest achievement scores in city-wide tests were located in a school with one of the strongest media programs.[52] In Oakland, California, researchers surveyed teachers, parents, and students to evaluate the media center at Sobrante Park Elementary School and reported improved reading and student evaluation, new patterns of instruction, and behavioral changes in students with specific problems. Moreover, kindergartners who used the media center more than other kindergartners scored exceptionally high on reading readiness tests.[53] Furthermore, a U.S. Office of Education study of nine exemplary media centers in three inner city schools reported that media center resources, staff, and facilities had been instrumental in changing atitudes toward reading.[54] The Fourth Annual Report of ESEA Title I, presenting findings about compensatory programs similar to those of school media centers, reported improvements in language and reading skills.[55] Over half the 345 teachers interviewed in conection with media centers of excellence, mentioned that behavior had changed to a great extent since the additions of instructional materials and staff.[56] The ESEA Preliminary Report (1970) indicated that school media centers had affected the learning style of children. Title II had significant impact between 1965 and 1968, especially in the preparation of class assignments and in reading for pleasure. Nearly 60,000 schools reported increased school media center use by all students, by students with reading problems, and by gifted students. In each case, over one-quarter of the schools attributed increased use extensively

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[50] Mary Virginia Gaver, *Effectiveness of Centralized Library Service in Elementary Schools (Phase I)*.

[51] Henry W. Ray, *Instructional Media and Heuristic Learning, Final Report* (Contract with Bureau of Research, U. S. Office of Education, Washington, D. C., Bureau No. BR-5-1-26, conducted by Warminister, Pennsylvania Centennial School District, December 1966).

[52] K. H. Wright, "The CHALLENGE Instructional Materials Program," *Illinois Libraries*, LII (September, 1970), 610.

[53] *An Evaluation Report on the Multimedia Services Project: Sobrante Park School* (Oakland, California: Division of Instructional Media and Research Department, Oakland Public Schools, February, 1970), p. 36.

[54] *Descriptive Case Studies of Nine Elementary School Media Centers in Three Inner Cities* (U. S. Department of Health, Education, and Welfare, Office of Education), p. 180.

[55] *Title I, ESEA: A Review and a Forward Look, 1969, Fourth Annual Report* (National Advisory Council on the Education of Disadvantaged Children, January, 1969), pp. 53-70.

[56] *Emphasis on Excellence in School Media Programs* (U. S. Department of Health, Education, and Welfare, Office of Education, pp. 187-188; 189-191.

to Title II programs. Another 40 percent attributed increased use to a moderate extent to Title II programs.[87] There is a consensus among educators that vocational students, often less print-oriented than others, benefit by access to a school library media center. Still another study demonstrates that the disadvantaged child has special needs that may be best served by a multimedia approach to learning.[88]

Summary

Educators, disenchanted with textbooks, including those engaged in minority studies, have sought alternative sources of information in multimedia. Both the quantity and quality of educational media and of research in educational media effectiveness are presently at minimal levels, while research indicates that school media center services have contributed to certain educational programs and that the newer media have assisted certain learners – the disadvantaged, for instance. The evidence assembled so far fails to demonstrate conclusively the effectiveness of the multimedia approach to teaching and learning, or of school library media centers. Title II ESEA has sought to improve the quality and quantity of educational materials in school media centers and to encourage research efforts, but its success or failure is as yet unproved.

[87] *The ESEA Title II Evaluate Survey: A Preliminary Report, November, 1970* (Mimeographed), p. 13.

[88] James D. Finn for the EMC Committee on Vocational Education, Part III; Education Media and Vocational Education (Contract No. OE-5-16-032 conducted for the U. S. Office of Education by Educational Media Council, May, 1967), pp. 12-13.

III

METHODOLOGY

Lawrence, Kansas, the community setting for this research on media use in minority studies, is the home of the University of Kansas and Haskell Indian Institute. Settled by free-state New Englanders, this city of over 40,000 includes Black (12%), American Indians, Mexican-Americans, and Orientals (each less than 1%). On September 7, 1971, there were 7,891 students in the various attendance centers of Lawrence Unified School District 497. About 10.3% of this number were members of minority races. At Central Junior High School, 15% were from minority races as opposed to 9.3% and 9% in the other two junior high schools. [9]

ESEA Title II Grant

Previous to this study, an ESEA Title II Phase I special purpose grant had enlarged the holdings of the school media center. The Phase 2 grant of approximately $6,000 has as its purpose that of increasing the scope of library materials in order to extend present services to teachers and students, especially to the American Indian, Mexican-American, and Negro minorities in the school and in the surounding area. The Phase 2 grant provided also for a research project which would measure the effects of materials carefully selected and accessible in a school media center upon the learning outcomes of a classroom instructional unit which would concern American Indians and Mexican-Americans, and which would be taught during five weeks during the spring of 1974. The teaching of this unit was actually extended for an additional week.

Working with the principal, the librarian, and the researchers, the classroom teachers also developed the following common goals for their classroom unit:

Affective Domain

To know generally the history of interaction which underlies present-day relationships between the predominant white culture and the American Indian and Mexican-American cultures.

To know current artist, writers, and leaders of the American Indian and the Mexican-American minorities.

To know the major issues facing American Indians and Mexican-Americans today.

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[9] Information provided by Carolyn Berneking, Librarian at Central Junior High School, Lawrence, Kansas, Spring, 1973.

To identify elements of ethnic bias in communications.

Cognitive Domain

To accept and value American Indian and Mexican-American contributions in various fields of human endeavor.

To value members of ethnic groups as persons, including oneself as a member of an ethnic group.

Selection of Media

The textbook, *Minorities: U.S.A.*, had been previously selected for use in ninth-grade social studies.[90] Consultants for each section of this text are themselves members of the ethnic groups being considered. The subject matter is indicated by the following excerpts from the Contents:

Unit One. American Indians

1. Why Couldn't Indians and White Men Get Along with Each Other?
2. Should Indians Have the Right to Live Where They Wish?
3. How Were the Indian Tribes Destroyed?
4. What Right Did Reservation Indians Have?
5. What Problems Do American Indians Still Face Today?

Unit Three. Mexican Americans

1. Who Are the Mexican-Americans?
2. How Did Mexican-American Become a Forgotten Minority?
3. How Are Mexican-Americans Trying to Improve Their Lives?

During the spring of 1973, graduate students at the School of Library Science, Emporia Kansas State College, prepared a consideration file of materials which contained 223 items in eight categories. (See Appendix A, for the number of items in each category and their cost.) Their choices followed an analysis of student reading scores and student autobiographies, and an observation of the students to be involved in the study in their school setting. Reading scores on the Durrell Listening Reading Series revealed that these eighth graders had a mean grade equivalent of 7.8 and a range of 3.4 to 12.4.[91] A distribution of their reading scores on the various grade levels guided the selection of print materials.

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[90] Milton Finkelstein, Jawn A. Dandifer, and Elfreda S. Wright, *Minorities: U. S. A.*

[91] Donald D. Durrell, Mary T. Hayes, and Mary B. Brassard, *Durrell Listening-Reading Series.*

Table 1

Reading Levels of Students and Selected Books on Minorities

Reading Levels	Students (N = 160)	Books (N = 131)
4-6	27.5%	36.8%
7-9	56.5%	48.0%
10 and over	16.0%	15.2%
	100.0%	100.0%

The twenty-six autobiographies yielded personal information about family backgrounds, interests, problems, present employment and future vocations, and deep concerns about world problems. The individuality which characterized the autobiographies indicated a need for a rich diversity of media resources. Observation of students and teachers in their classrooms, hallways, and library, and the opportunity to visit with some of them, personalized further the selection task. Special criteria for minority materials were applied to each candidate for the consideration file.[92]

In addition, the librarian at Central drew upon selected sources, such as professional selection aids, bibliographies from state departments of education, the U.S. Department of the Interior, ethnic associations devoted to authenticity in materials, and university presses. Items were subjected to evaluative criteria created to guide collection development at Central. Assisted by the teachers, the librarian acquired the selected media, processed and arranged them for student and teacher use. In order to increase accessibility to these materials, the librarian prepared listings of both Indian and Mexican-American media for each teacher. Teachers and all participants in the research project received a monthly acquisition list. In addition, an attractive annotated bibliography of selected American Indian books was published and distributed to interested students, teachers, and others.[93] Finally, during the teaching of the minorities unit on American Indians and Mexican-Americans, the librarian and the teachers frequently trucked an assortment of needed materials to the classrooms to provide easy access.

Selection of Control and Experimental Groups

Seven ninth grade classes studied minorities during the spring term in 1974. Students were assigned to these classes by the school admin-

[92] M. Lucia James, "Instructional Materials Can Assist Integration," *Educational Leadership*, XXVI (November, 1968), 129-133.

[93] Carolyn Berneking, *The American Indian: an Annotated Bibliography*.

istration, which paid attention to administrative problems, such as scheduling conflicts and the like, but made no conscious effort to assign students according to their ability or their previous knowledge of minorities. The effect was a random selection of students in each class with no significant differences among the classes."[24]

Three of the four teachers taught one class each, and one taught four classes. The three teachers with one class each were to use a wide variety of media in their instruction, while the remaining teacher was to use the textbook method with no other media. The three classes using a variety of media were designated as the experimental group, and the other classes as the control group. The teachers, school principal, and researchers discussed the details of the studies in a formal, half-day meeting as well as in less formal contacts. These meetings resulted in agreement on objectives for the unit, which guided the selection of ethnic materials for the media center and the teaching of the unit.

Development of the Instrument

The instrument used in the pre-test and post-test consisted of three major sections (see Appendix B). The first asked for personal data, such as sex, ethnic background, previous study of American Indians or Mexican-Americans, and library use. The next part, an attitude scale, consisted of 30 statements relating to these groups. Although the statements were mixed, the items were separated for analysis. The items concerning American Indians were 1, 2, 5, 7, 9, 11, 13, 14, 17, 18, 21, 22, 23, 24, 25, and 29. Those Mexican-Americans were 3, 4, 6, 7, 3, 4, 6, 7, 8, 10, 12, 15 16, 19, 20, 21, 26, 27, 28, and 30. Item 7 was counted twice because it asked questions with reference to both groups. The last section, designed to measure the students' factual knowledge of the two groups, consisted of two subsections of ten questions each. One subsection concerned Mexican-Americans; the other, American Indians.

The instrument, created by two graduate library science students, was based on a review of the textbook used in the class, on the school media center materials relating to the two groups to be studied, as well as on other sources. After the questionnaire was pre-tested on a group of eighth grade students at Central Junior High School, some minor adjustments were made in the wording. In addition, an item analysis revealed that the scoring of item 7 on the attitude scale needed to be reversed. Item 7 reads: "Language and cultural differences account almost entirely for the difficulties some Mexican-American and American Indian students have in school." The researchers had labelled the statement as expressing a positive attitude towards these two groups, because it provided an explanation for the difficulties that some minority group members experience in school. However, the pre-test revealed

[24] Section IV deals with the presentation and analysis of these data and covers this point in greater detail.

that the statement should be scored as a negative item, because the students viewed it as indication that the language and cultural differences were an impediment to success in school. After these changes, the instrument was ready for the ninth grade classes.

The Study

The pre-test was administered just before the six-week unit was taught. The instrument was distributed to the students during the regularly scheduled class times by the researchers. The students were instructed to complete all items in the sections, dealing with personal characteristics and attitudes. In the last section, which concerned cognitive knowledge, they were told not to guess, but to answer only those items which they knew. The researchers stressed the anonymous nature of the instrument.

After the pre-test, the study of the units began. The teachers of the experimental classes used a variety of media, some of which were assembled on a book truck, shared by the experimental teachers and students, and which was in addition to other media used in the classroom and media used in the library. The control teacher, on the other hand, used only the text and brought no other media into the classroom. However, his students did have access to the media center, although they were not required to make use of it.

When the units had been completed, the post-test was administered by the researchers, as in the pre-test, during the regularly scheduled class periods. Even though the same instrument was used in both the pre- and post-tests, it was felt there would be no significant carry-over, because there had been a time lapse of a little over six weeks. A second reason for believing there would be little carry over was that the students would not be motivated by grades or other such factors to recall the specifics of the instrument. And, finally, the students did not know in advance that the same instrument would be used in both tests.

A series of concluding interviews was held with the teachers, principal, and media specialist (see Appendix C). They were asked to comment on their general impression of the study; possible contaminating factors; the effects of ethnic materials on learning and teaching; the role of the school library; and the purpose of this unit in the curriculum. Their answers provided an informal check on the validity of the study as well as a useful insight into what had happened during the six-week classroom unit. This information was of value in interpreting the data and has been incorporated into Appendix C of this study.

IV

PRESENTATION AND ANALYSIS OF DATA

Characteristics of Students in Pre-Test and Post-Test

Students who participated in the study were queried before and after the classroom unit on American Indians and Mexican-Americans. A tally of their responses to the section of the instruments dealing with individuals characteristics reveals numerous similarities and some differences. Basically, the composition of both the pre-test and post-test groups was similar with respect to sex, both having almost as many boys and girls. A large difference between the pre- and post-test groups would have been unusual, because this could only result from absences

Table 2

Sexual Composition of the Pre-test and Post-test Groups

	Pre-test		Post-test	
Sex	Number	Percentage	Number	Percentage
Boys	68	48%	69	49%
Girls	73	52%	73	51%
	141	100%	142	100%

Table 3

Ethnic Composition of the Pre-test and Post-test Groups

Ethnic	Pre-Test		Post-Test	
Background	Number	Percentage	Number	Percentage
American Indians	5	3.5%	1	0.7%
Asian American	2	1.4%	2	1.4%
Black Americans	15	10.6%	18	12.7%
Mexican-Americans	5	3.5%	5	3.5%
White Americans	108	76.6%	109	76.8%
Others	6	4.3%	4	2.8%
No Response	—	—	3	2.1%
TOTALS	141	99.9%	142	100.0%

or changes in enrollment. Such alterations were not likely during a six-week period in the spring term.

The ethnic composition of the pre- and post-test groups was approximately the same at the beginning as at the end of the instructional unit. White Americans accounted for three out of every four students, while black Americans accounted for a little over one out of every ten students. There were few members of other ethnic backgrounds enrolled in these classes.

The instrument also asked if the students had studied American Indians or Mexican-Americans either in school or on their own and, if they had, when. In the pre-test, the students were fairly evenly divided among those who had studied one or both ethnic groups, those who had not studied either group, and those who could not remember.

Table 4

Study of American Indians and Mexican-Americans by Pre-test and Post-Test Groups

Extent of	Pre-Test		Post-Test	
Previous Study	Number	Percentage	Number	Percentage
Studied one or both groups	45	31.9%	140	98.6%
Had *not* studied either group	50	35.5%	2	1.4%
Don't Remember	46	32.6%	----	----
TOTALS	141	100.0%	142	100.0%

As can be seen from Table 4, many pre-test students did not indicate when they had studied these groups. The post-test should have shown that 100% of the pupils had studied these ethnic groups within

Table 5

Time of Study of American Indians and Mexican-Americans by Pre-Test and Post-Test Groups

	Pre-test		Post-test	
Time	Number	Percentage	Number	Percentage
Less than one year	6	15.4%	138	97.2%
1 - 3 years	21	53.8%	4	2.8%
Over 3 years	12	30.8%	----	----
TOTALS	39	100.0%	142	100.0%

the last year, because they had just finished units on these groups. Respondent error probably accounts for the few who answered otherwise.

In order to measure library use, several questions concerned such activities as the number of visits to the library, reasons for library use, types of materials used, and finally, the use of material on American Indians and/or Mexican-Americans. The number of library visits in the two months prior to the study was similar to the number of visits indicated on the post-test questionnaire. Since the questions asked for the estimated number of visits during the last two months prior to the post-test, the answers should reflect library use during the last two weeks of the period covered by the pre-test answers and the period during which the units were taught. The most common pattern appears to be eight visits in two months or one visit per week, although the majority of students visited the library less often than once a week. Informal observation by the school librarian indicated students in the experimental group visited the library more frequently than the responses showed.

As might be expected, students indicated in both the pre- and post-tests, that their library use was related to school work. However, a large minority of the visits were unrelated to the direct influence of the curriculum. As can be seen from Table 7, 190 (112 + 78) students

Table 6

Number of Library Visits by Pre-Test and Post-Test Groups

	Pre-Test		Post-Test	
Number of Visits	Number of Students	Percentage	Number of Students	Percentage
1	8	5.7%	10	7.0%
2	14	9.9%	14	9.9%
3	18	12.8%	10	7.0%
4	15	10.6%	18	12.7%
5	10	7.1%	17	12.0%
6	10	7.1%	5	3.5%
7	10	7.1%	8	5.6%
8	36	25.5%	29	20.4%
More than 8	14	9.9%	11	7.7%
Never	2	1.4%	6	4.2%
Don't Remember	4	2.8%	13	9.2%
No Response	—	—	1	0.7%
TOTALS	141	99.9%	142	99.9%

Table 7

Reasons for Library Visits by Pre-Test and Post-Test Groups

Reasons	Pre-Test	Post-Test
Come with a class to the library	112	94
Had free time and decided to use the library	87	82
Had to do an assignment in the library	78	69
Other	41	39

TABLE 8

Types of Media Used by Pre-Test and Post-Test Groups

Type of Media	Pre-Test	Post-Test
Print:		
Books	131	121
Magazines	90	78
Verticle file Materials	34	28
Newspapers	17	26
Maps	11	18
Subtotals	283	271
Non-Print:		
Filmstrips and/or Slides	17	23
Cassettes	11	9
Records	12	3
Reel to reel tapes	1	2
Overhead transparencies	3	3
Motion picture films	6	1
Video tapes	2	4
Models	1	0
Subtotals	53	56
Other	14	4
TOTALS	350	331

in the pre-test and 163 (94 + 69) in the post-test indicated that one or more visits to the library were a result of their coming with a class or of their having to do an assignment in the library, in contrast to 128 (87 + 41) in the pre-test and 121 (82 + 39) in the post-test who indicated that one or more visits were to fill free time or for other reasons. It is interesting that the order in which the students selected the reasons for coming to the library did not change from the pre-test to the post-test.

It was no surprise to learn again, that students most frequently used books and, then, magazines when they visited the library. Vertical file materials are a poor third, followed by newspapers and filmstrips and/or slides, which tied for fourth place in the pre-test and were fourth and fifth in the post-test. The overwhelming use of books and other materials probably reflects the composition of the collection and the students' past experience.

Use of library materials relating to American Indians and/or Mexican-Americans increased from the pre-test to the post-test, but not dramatically. This lack of dramatic growth in use may be attributed to the book orientation of the control group.

Table 9

Use of Media Relating to American Indians and/or Mexican-Americans by Pre-Test and Post-Test Groups

	Pre-Test		Post-Test	
Extent of Use	Number	Percent	Number	Percent
Did not use materials	68	48.2%	51	35.9%
Don't remember	36	25.5%	5	3.5%
No response	4	2.8%	19	13.4%
Used Materials	33	23.4%	67	47.2%
TOTALS	141	99.9%	142	100.0%

Finally, those students who had used American Indian and/or Mexican-American materials were asked why they had used these materials. Class related reasons were given most frequently in both the pre- and post-test periods. However, other non-class related factors seemed less important in the post-test. This shift undoubtedly reflected the need to use these materials to meet the demands of the curriculum.

Within the participating classes, characteristics, such as sex and ethnic background remained relatively stable during the study. About one-third of the group had studied American Indians and/or Mexican-Americans prior to the units presented in the course on minorities; one-third had not studied these groups; and one-third could not remember. The pattern of library use prior to this study, as measured by the number of visits, reasons for use, and types of materials used, remained approxi-

mately the same after the study. As expected, there was an increase in the use of materials dealing with American Indians and Mexican-Americans.

Table 10

Reasons for Use of Media Relating to American Indians and/or Mexican-Americans by Pre-Test and Post-Test Groups

Reasons	Pre-Test	Post-Test
Curriculum Related Reasons:		
Used the materials in class	21	60
Used the materials in the library for class assignment	28	50
Subtotals	49	110
Non-Curriculum Related Reasons:		
A friend recommended the material	3	3
Saw the materials displayed	2	7
Found the materials on the library shelf	13	7
Saw the materials listed in the Library card catalog	15	7
Other	8	7
Subtotals	41	31
TOTALS	90	141

Analysis of the Control and Experimental Groups Based on Pre-Test Data

On the day the pre-test was administered, there were 141 students in the seven sections studying minorities. Three of these sections, totaling fifty-seven students, were designated as the experimental group. The other four sections formed the control group of eighty-four students.

As described earlier, the students were assigned to the various sections on a random basis by the school administration, although there was some opportunity for a student to select the section he wished. An analysis of the pre-test data using the *F* ratio showed that the two groupings were not significantly different from one another. The mean scores of the two groups on the section dealing with attitudes concerning American Indians were 2.27 for the control group and 2.20 for the experimental group. The *F* ratio of 1.1285 is not significant at either the .01 or .05 level. Thus, it was concluded that the two groups were

from the same population and this difference in their mean scores was due to chance alone.

A similar situation existed with the data on the attitudes of the two groups towards Mexican-Americans. The control groups had a mean score of 2.25 and the experimental group had 2.20, the same as their score for the section on American Indians. In this instance, the *F* ratio is less than one, 0.6643, which is not significant. Again, it was concluded that the variation was due to chance.

In the factual section on actual knowledge, the mean score of the control group on the section dealing with American Indians was 31%, and that of the experimental group was 32%. The *F* ratio is quite small, 0.3037, and is not significant at either .01 or .05. Here, too, the groups appears to be from the same population.

On the last section dealing with factual knowledge about Mexican-Americans, the *F* ratio was only 0.4456 and not significant. However, the mean scores for the two groups were slightly higher than they were on the section concerning American Indians. The scores for the factual section on Mexican-Americans were 45% for the control group and 42% for the experimental group.

Although there were some differences in their attitudes towards and knowledge of American Indians and Mexican-Americans, these were not significant. In fact, the *F* ratios were all under one, except for the section on attitudes towards American Indians. In this section, the ratio was slightly over one, but well under the 3.84 listed in this *F* table under 1 degree of freedom and infinity. From this analysis, it would seem that the two groups were well matched.

Analysis of the Control and Experimental Groups Based on Post-Test Data

The first research question asked if there would be a significant difference in the cognitive and affective learning between studnts using multimedia and those using textbooks. In order to explore this area, the post-test data for the two groups were analyzed using the *F* ratio. When the post-test was administered, there were 142 students who filled out questionnaires, one more than for the pre-test. However, the members in the two groups had changed slightly. Now, there were only 81 as opposed to 84 in the control group and 61 as opposed to 57 in the experimental group. Nevertheless, the groups were not significantly different from one another in their attitudes towards or factual knowledge of the two ethnic groups involved.

Attitudes toward American Indians, as measured by the instrument, produced scores of 2.15 for the control group and 2.02 for the experimental. The *F* ratio was 1.7529, which is not significant at either the .01 or .05 level.

Attitudes towards Mexican-Americans were more favorable, but not by very much. The mean scores for the two groups on this section are 2.04 for the control and 1.99 fr the experimental. The *F* ratio of 0.2840

is not significant, but is not the lowest ratio for these groups. The lowest ratio for these groups. The lowest is 0.0891 and is derived from mean scores of 64% and 63% on the post-test section requesting factual information on Mexican-Americans. Both groups had almost the same amount of factual knowledge. A higher but still not significant *F* ratio was calculated for the section concerning factual knowledge of American Indians. This figure of 1.2585 is based on means of 40% and 42% for the control and experimental classes respectively. According to this analysis, it seems clear that neither group was significantly different from the other in either their attitudes towards or knowledge of these two ethnic groups. These data and the subsequent analysis do not support the contention that access by students and teachers to a variety of selected media significantly affects cognitive or affective learning in the area of minority studies.

Control Group Pre-Test and Pro-Test Data Analysis

Even though there may be no difference of note between the control and experimental classes in either the pre- or post-test periods, it is worthwhile to examine the changes within each group in each of the four major sections. Presumably, any changes would result from the teaching and learning which took place in between the pre- and post-tests.

As far as the control group is concerned, their pre- and post-test mean scores were significantly different in three of the four areas, the one exception being in their attitude towards American Indians, which went from 2.27 in the pre-test to a slightly more favorable 2.15. The *F* ratio is 2.7050, which is below the 3.84 and 6.64 needed to be considered significant at the .05 and .01 levels respectively. Apparently, their attitudes towards American Indians remained at its somewhat favorable level at the beginning of the study.

Their attitudes towards Mexican-Americans, on the other hand, went from 2.25 to 2.04, producing an *F* ratio of 7.2116 which is significant at the .01 level. This change represents a move from a generally favorable attitude to an even more favorable one.

Factual knowledge about both American Indians and Mexican-Americans increased greatly. The mean scores for the American Indian sections were 31% and 40%, carrying an *F* ratio of 16.5305. The scores on the Mexican-American sections were 45% and 64% leading to an *F* ratio of 33.3152. Both are significant at the .01 level. These increases lead to the conclusion that the control classes substantially increase in their factual knowledge of these minority groups during the classroom unit of instruction.

Experimental Group Pre-Test and Post-Test Data Analysis

The experimental group also changed significantly during the course of the study. On items relating to American Indians, their mean score

on the attitude scale was 2.20 at the beginning of the minority unit and 1.99 at the end. These figures lead to an *F* ratio of 4.6346, which is significant at the .05 level, but not the .01 level. Similarly, the mean scores on Mexican-American items were 2.20 at the start and 1.96 at the finish, yielding an *F* of 5.9257. This *F* is significant at the .05, but not at the .01 level. Factual knowledge of the ethnic groups significantly increased, as it did in the control group. The experimental group began with a mean score of 32% on the American Indian factual section and ended with 41% for of *F* of 11.2286. They had a 42% mean score on the Mexican-American pre-test factual section and a 62% on the post-test, for an *F* of 17.3447. Both *F* ratios are significant at the .01 level.

Apparently, learning experiences for the experimental classes were effective in increasing both affective and cognitive learning, but to varying extents. Affective learning, as measured by the attitude scales, increased, but not as much as cognitive learning.

Analysis of Both the Control and Experimental Groups Based on Pre-Test and Post-Test Data

As might be expected from the foregoing analysis, when both the control and experimental groups are combined and considered as one group, they show significant changes in both affective and cognitive learning between the pre- and post-tests. The least change seems to have occurred in their attitudes towards American Indians from a total mean score of 2.24 to 2.09. The resulting *F* or 6.7027 is just over the 6.63 cutoff for one degree of freedom and infinity. The three other sections show much higher *F* ratios. The attitudes towards Mexican-Americans went from 2.23 to 2.02 for an *F* of 12.7944. Factual knowledge of American Indians went from 31% to 41% and produced of *F* of 31.1794. But, the largest *F* was the 52.7848 created by a jump in the mean score on the Mexican-American factual section from 44% to 63%.

It seems safe to say that attitudes and factual knowledge can be altered in the classroom, but that neither is affected by the presence or absence of a wide variety of media in the teaching methods employed.

Sex as Related to Attitude towards and Knowledge of American Indians and Mexican-Americans

To determine the effects of sex on learning, the relationship between sex and attitudes towards and knowledge of the two ethnic groups was analyzed. The findings differed from what had been anticipated. Initially, there seemed to be no reason to suspect that boys would know any more or feel any different about American Indians and Mexican-Americans than girls. The pre-test revealed that this situation was only partially true.

Boys and girls did not differ significantly with respect to their attitudes and knowledge about American Indians. The boys' mean

score on the American Indian attitude scale was 2.31, and the girls' was 2.18. On the factual section, the boys averaged 32%, and the girls 31%. These figures lead to *F* ratios of 3.5026 for the attitude scale and 0.4527 for the factual. Neither is significant.

On the Mexican-American attitude scale, the boys' mean score was 2.35, and the girls' was 2.12, for an *F* of 14.4583, which is significant at the .01 level. According to the data from the Mexican-American factual section, boys also know significantly more than girls about this ethnic group. The boys' score was 49% and the girls' was 39%, for an *F* of 9.2028. This, too, is significant at the .01 level.

It was surprising that these differences were found in the pre-test, because there is no apparent explanation for them. However, they may reflect the fleeting nature of attitudes, coupled with some lucky guessing on the factual section. It is also possible that the instrument was not able to bring out the actual situation for some unknown reason. The sample of 68 boys may not reflect the population accurately, again for some as yet undiscovered reason. Of course, a combination of factors may have created these differences. Finally, it may just be possible that boys really do have less favorable attitudes towards Mexican-Americans and know more about them. In any case, both the boys' and the girls' attitude scores are above the neutral 3.00 and so are somewhat favorable.

Analysis of the post-test showed no significant differences between the sexes on either their attitudes towards these groups or knowledge of them. The boys' means score on the attitude scale dealing with American Indians was 2.11 and the girls' was 2.07, which yield an insignificant *F* score of 0.1764. The mean scores on the attitude scale covering Mexican-Americans also showed no significant differences with 2.06 for the boys and 1.98 for the girls, for an *F* value of 0.5473. Their knowledge of American Indians produced mean scores of 42% for the boys and 40% for the girls for an *F* of 1.3594. The *F* on their knowledge of Mexican-Americans, derived from mean scores of 64% and 63% for the boys and girls, respectively, was 0.2363 which is not significant.

Both boys and girls increased in their knowledge of an favorable attitude towards Mexican-Americans. The boys' attitude showed a greater positive shift than the girls'. However, the girls' knowledge increased more than the boys'. Apparently, the educational experience had a leveling effect in this instance.

Ethnic Background as Related to Attitudes towards and Knowledge of American Indians and Mexican-Americans

The third research question dealt with the effects of ethnic background on attitudes and knowledge in the area of ethnic studies. It was felt that study of these groups would create increased knowledge and more positive attitudes in the majority whites as well as in the minority non-whites. For some minority individuals, such study may mean learning about the group to which they belong. In these cases, minority studies might result in improved self-image. Therefore, analysis

of pre- and post-test scores of members of the majority culture and those of minority cultures was undertaken.

Majority and Minority Group Member

Because of the small number of individuals in each of the various minority groups, it was decided to group all minorities together so as to create two groups: those whose ethnic background was representative of the majority of United States citizens, and those whose background was not.

Majority and minority attitudes towards American Indians did not differ significantly on the pre-test. The *F* value based on mean scores of 2.26 and 2.27 for the majority and minority respectively was 1.3556. However, the majority score of 2.29, and the minority's score of 2.05, on the Mexican-American attitude scale produced an *F* ratio of 10.2676, which is significant at the .01 level. Even though both scores represent favorable attitudes, minority members as a group had significantly more favorable attitudes. The pre-test showed that majority and minority members did not differ significantly in their knowledge of either American Indians or Mexican-Americans. The majority's mean score on the American Indian factual section was 32% and the minority's was 31% for an *F* of less than one, 0.0567. The *F* was higher, but still not significant, on the Mexican-American factual section, 2.4010, and the scores were farther apart, 42% for majority members and 49% for minority members.

The post-test revealed that both groups' attitudes became more favorable and their knowledge increased. However, it seems that the minority's attitudes and knowledge increased more than the majority's. Some significant differences resulted. For example, the majority's post-test mean score on the American Indian attitude scale was up from 2.26 on the pre-test to 2.15 level, while the minority's was up from 2.17 to 1.89. The resulting 5.0672 *F* ratio is significant at the .05 level, but not at the .01 level. As in the pre-test, the minority had significantly more favorable attitudes towards Mexican-Americans than did the majority. The majority score went from 2.29 to 2.12, and the minority from 2.05 to 1.65, with the post-test scores yielding an *F* value of 17.0653, which is significant at the .01 level.

The two groups' knowledge of American Indians did not vary significantly on the post-test, with the majority having a mean score of 42%, and the minority a mean of 31%, for an *F* of 3.4753. Yet, their knowledge of Mexican-Americans was significantly different at the .05 level, but not the .01. Here, the majority mean was 66% and the minority 56%, for an *F* of 4.1182.

It was not surprising that both groups held generally favorable attitudes towards American Indians and Mexican-Americans because both groups are represented in the student body which has a recent history of racial harmony. The differences also are not unusual considering that

members of minority groups are likely to have empathy towards members of other minority groups as well as members of their own group.

Minority Control and Experimental Groups

An examination of the majority and minority members of the control and experimental groups using the *F* ratio showed that there were no significant differences in the scores of these two groups.

There were 33 minority group members in the pre-test groups, 24 in the control group, and 9 in the experimental. The post-test had a total of 31 minority members who were distributed in a similar manner, 22 in the control and 9 in the experimental groups. Minority group members had pre-test means of 2.20 in the control group and 2.08 in the experimental group on the American Indian attitude scale. The corresponding *F* score is 0.5238. Attitudes towards Mexican-Americans produced another insignificant *F* value below one, 0.3538, deprived from pre-test means of 2.07 and 1.98 for the control and experimental groups.

Knowledge of American Indians and Mexican-Americans also did not vary significantly between the minority control and experimental group members. Here, the control group had a mean of 29% and the experimental had 36%, which lead to an *F* of 1.5499 on factual knowledge of American Indians. Means for Mexican-Americans, were 47% and 54%, yielding an *F* below one, 0.8900.

A similar pattern was found in the post-test, in which the control and experimental minority groups members were not significantly different. Attitudes of the control group toward American Indians were reflected by a mean score of 1.95, and those of the experimental group by 1.75. The *F* was a low 0.3837. But, the *F* on Mexican-American attitude scores was even lower, 0.1847, derived from means of 1.69 and 1.54 for the control and experimental groups.

The *F* value on post-test knowledge of American Indians was 1.2214, which is a little higher but is still far from being significant. In this case, the control had a score of 35% and the experimental a score of 42%. However, the groups were even closer together on their knowledge of Mexican-American, 57% and 54%. Here the *F* was only 0.0622.

Apparently, the groups were similar before instruction and the differences in the instruction given to the two groups did not create any variation. It should be noted, though, that there was an increase in favorable attitudes as well as knowledge in all but one instance; experimental group scores on knowledge of Mexican-Americans remained constant at 54%.

Majority Control and Experimental Groups

As mentioned earlier, the majority group members in the control and experimental groups did not vary significantly in either the pre- or

post-tests. The 108 majority members in the pre-test were divided 60 and 48 between the control and experimental groups. The number present in the post-test was only one more, 109, and the distribution was approximately the same, 59 in the control and 50 in the experimental.

Table 11 shows the mean scores on the pre-test and the corresponding *F* scores, none of which even approach being significant.

TABLE 11

Attitudes and Knowledge Concerning American Indians and Mexican-Americans in the Pre-Test Group

Attitudes and Knowledge	Pre-Test Mean Scores		F Value
	Control (N = 60)	Experimental (N = 48)	
Attitudes:			
American Indian	2.30	2.22	1.0540
Mexican-American	2.32	2.24	1.4250
Knowledge:			
American Indian	32%	32%	0.0003
Mexican-American	44%	40%	0.9260

A similar table for the post-test shows none of these scores varied significantly. As with the minority group members, the method of instruction did not create significant differences between the groups.

Table 12

Attitudes and Knowledge Concerning American Indians and Mexican-Americans in the Post-Test Group

Attitudes and Knowledge	Pre-Test Mean Scores		F Value
	Control (N = 60)	Experimental (N = 48)	
Attitudes:			
American Indian	2.22	2.07	2.8858
Mexican-American	2.17	2.07	1.3911
Knowledge:			
American Indian	41%	43%	0.2652
Mexican-American	66%	65%	0.1280

Library Use as a Factor

One of the factors which this study sought to examine was the effects of library use on cognitive and affective learning. In order to

measure library use, subjects were asked to indicate, in question four, how many times they had used the library and, then, in question five, the reason for use. Although there was some confusion on this last question, the intent of the researchers was to include all instances of use, regardless of motive given in question four. Some respondents, however, did not count class-related library use on the pre-test. This failure to do so did not seem to be a widespread problem and did not noticeably affect the findings.

Number of Library Visits

When the responses to question four were analyzed, they were arranged in five major groupings. The scores on the attitude and knowledge sections were compared in an attempt to discover if one group had a significantly higher mean score in one or more of the four sections. The five groups and their scores on the pre-test are shown in Table 13.

Table 13

Number of Library Visits as Related to Pre-Test Scores

Number of Library Visits	Number of Individuals (N = 141)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
1-3	25	2.29	2.24	30%	44%
4-6	43	2.21	2.19	34%	47%
7 or more	56	2.19	2.18	33%	42%
Don't remember	14	2.47	2.49	23%	43%
Never (0 uses)	3	2.75	2.52	11%	23%

The *F* value, based on the pre-test American Indian mean attitude scores, was 1.5994, which is not significant. However, the value for the Mexican-American scores is 2.3967, which is significant at the .05 level, but not the .01 level. As can be seen from Table 13, the 14 persons responding to "dont remember" scored 2.49. This score and the 2.52 for those never using the library contributed most heavily to the overall *F* value. Although there were only three people who said they had never used the library in the last two months, their low level of factual knowledge about American Indians added to an overall *F* score of 3.3718. The "don't remembers" also added to the 3.3718, which is significant at the .01 level. This analysis seems to point out that library users are more knowledgeable about American Indians than are non-users.

The same was not the case for the mean scores on knowledge of Mexican-Americans. Here, the *F* value was only 1.0470 and is not

significant. Personal interest, library displays, other course work, and many other factors probably had a role in providing individuals with their knowledge of these groups.

An examination of the post-test data reveals a more pronounced trend. Table 14 shows the five groups, but not necessarily the same individuals, and their post-test scores.

Table 14

Number of Library Visits as Related to Post-Test Scores

Number of Library Visits	Number of Individuals (N = 141)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
1-3	32	2.14	2.10	34%	61%
4-6	45	2.11	2.06	40%	64%
7 or more	41	2.07	2.00	45%	69%
Don't remember	11	2.62	2.40	43%	69%
Never uses	13	1.56	1.36	46%	42%

All of the overall *F* scores are significant at the .01 level, and it is generally the "don't remembers" and "nevers" who produced the variation. The post-test mean scores on attitudes toward American Indians was 6.2011, with the "don't remembers" and "nevers" accounting for the difference, the former with a less favorable attitude, and the latter with a more favorable one. The same situation was found with the scores on the Mexican-American attitude section, in which the *F* was 6.1715 and "don't remembers" were less favorable and the "nevers" more favorable.

When the mean knowledge scores on the American Indian section are examined, it can be seen that those who used the library only one to three times were lower than any other group and are those who account for most of the variation. The *F* ratio is 3.8100, which is not as the previous two ratios, but is still significant at the .01 level. The *F* score on the knowledge of Mexican-American section was a little lower, 3.6961, but was still significant at .01. Here, most of the variation can be attributed to the non-users, who got a mean score of 19% lower than the next lowest. There might be some connection between library use and increased factual knowledge, but this is a very tenuous relationship.

Reasons for Library Visits

Another measure of library use is the reason for its use. Question five suggested three reasons and left space for the addition of others by the respondents. Since the subjects could check as many as applied,

the total number of responses exceeds the number of individuals in the the total number of responses exceeds the number of individuals in the study. These reasons were compared with the mean scores on the section dealing with attitudes and knowledge in an effort to determine if the reason for the use of the library affected learning. The following table summarizes these data for the pre-test.

Table 15

Reasons for Library Visits as Related to Pre-Test Scores

Reasons	Number of Responses (N = 318)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
Came with a class	122	2.23	2.21	32%	44%
To do an assignment	78	2.28	2.22	32%	44%
Had free time	87	2.24	2.19	32%	44%
Other	41	2.15	2.15	31%	46%

All of the *F* ratios are not significant; in fact, all are below one, except for attitudes towards American Indians which is 1.0530. The other *F* values are the following: attitudes towards Mexican-Americans, 0.4159; knowledge of American Indians, 0.0597; and knowledge of Mexican-Americans, 0.1851.

Apparently, no one reason had any more effect on learning than any other reason. As might be expected, the reason most often given was "came with a class," followed by "had free time" and "to do an assignment." The post-test saw a drop to 284 in the number of reasons given, with only one *F* score above one, attitudes towards Mexican-Americans at 1.7014. Neither this value nor the others are significant. Other values are the following: attitudes towards American Indians, 0.8958; knowledge of American Indians, 0.7180; and knowledge of Mexican-Americans, 0.4117. A summary of the number of reasons given and the corresponding mean scores on the post-test is reported in Table 16.

Use of Print Materials

Print materials were defined as newspapers, books, magazines, vertical file materials, and maps. The effect of their use on learning was examined by dividing the respondents into two groups based on the variety of media used. Group 1 consisted of those individuals who had indicated they had used no print materials or only one type of print media. Group 2 was composed of those who had used two or more types of print media.

Table 16

Reasons for Library Visits as Related to Post-Test Scores

Reasons	Number of Responses (N = 284)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
Came with a class	94	2.00	1.94	41%	63%
To do an assignment	69	2.07	1.99	41%	61%
Had free time	82	2.02	1.97	43%	65%
Other	39	1.89	1.73	44%	63%

The pre-test data for the two groups are contained in Table 17.

Table 17

Extent of Use of Print Media as Related to Pre-Test Scores

Groups	Number of Responses (N = 141)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
Group 1	48	2.26	2.29	30%	49%
Group 2	93	2.23	2.20	32%	41%

The F values for the attitude scores are 0.1888 for American Indians, and 1.8441 for Mexican-Americans, neither of which is significant. The *F* score for knowledge of American Indians is 0.7840, which is also not significant. However, the ratio for knowledge of Mexican-Americans is 4.1304, which is significant at the .05 level, but not at the .01 level.

The post-test data showed a somewhat different pattern.

Table 18

Extent of Use of Print Media as Related to Post-Test Scores

Groups	Number of Respondents (N = 140)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
Group 1	58	2.28	2.19	38%	62%
Group 2	82	1.96	1.90	43%	65%

An analysis of the post-test attitude scores using the *F* ratio showed the two groups to be significantly different from one another at the .01

level. The *F* values for attitudes towards American Indians was 11.0249, and for attitudes towards Mexican-Americans, 8.5841. The mean knowledge scores produced *F* values which were not as high. The *F* value on the American Indian section was 4.0899 which is significant at the .05 level, but not at the .01 level. The scores on the Mexican-American section were not significantly different and produced an *F* of only 0.5707. Those who read from a variety of media had significantly more favorable attitudes towards these two ethnic groups, but did not seem to know a great deal more about them than did those who used only one type of print media or none.

Use of Non-Print Materials

Library non-print materials included cassettes, records, reel-to-reel tapes, models, overhead transparencies, motion picture films, filmstrips and/or slides, videtotapes, and other materials which the subjects were asked to specify. As with the print materials, the respondents were divided into two groups. Group 1 consisted of those who indicated they had used none or only one type of media; and Group 2 was made up of those who had used two or more types.

The pre-test and post-test data for the two groups are shown in Table 19.

Chapter 19

Extent of Use of Non-Print Media as Related to Pre-Test and Post-Test Scores

Groups	Number of Respondents (Pre-test N = 141) (Post-test N = 140)	Mean Attitude Scores		Mean Knowledge Scores	
		American Indians	Mexican-Americans	American Indians	Mexican-Americans
Group 1					
Pre-test	126	2.25	2.22	31%	44%
Post-test	125	2.11	2.04	41%	64%
Group 2					
Pre-test	15	2.18	2.28	34%	46%
Post-test	15	2.18	2.28	34%	46%

The resulting *F* ratios were: attitudes towards American Indians, 0.4067 on the pre-test and 1.5231 on the post-test; attitudes towards Mexican-Americans, 0.2766 on the pre-test and 1.2614 on the post-test; knowledge of American Indians, 0.5055 on the pre-test and 0.3516 on the post-test; and, finally, knowledge of Mexican-Americans, 0.1076 on the pre-test and 0.3341 on the post-test. None of these indicates significant differences.

Findings

The data were analyzed in light of the four research questions which this study sought to answer. However, before the specific questions were examined, it was necessary to look at the characteristics of the students to determine if the control and experimental groups were similar. This analysis showed that there were no significant differences between the two groups in either their attitudes towards or knowledge of American Indians or Mexican-Americans.

In response to the first research question, the data clearly showed that both groups increased their factual knowledge and changed their attitudes to some extent. However, there were no significant differences between the two groups.

The second question dealt with the relationship of sex to attitudes and knowledge concerning American Indians and Mexican-Americans. In the pre-test, boys knew more about Mexican-Americans than girls and had a slightly less favorable attitude towards them than did the girls, although both were above the neutral point on the scale. There is no obvious reason for this finding, and the post-test found the two sexes to be approximately the same in their knowledge and attitudes concerning the two minority groups studied.

The relationship of ethnic background to attitudes towards and knowledge of American Indians and Mexican-Americans was the topic of the third question the study investigated. Minority group members had significantly more favorable attitudes towards Mexican-Americans than majority group members on the pre-test, although both were favorable. The post-test also brought out this difference in attitudes, with a significant difference at the .05 level, but not at the .01 level on American Indians. However, the post-test showed that the majority members' mean score on the Mexican-American factual section was significantly higher than the minority's at the .05, but not the .01 level. When the minority members in the control group were compared to those in the experimental group, no significant differences were found on either the pre- or post-tests. A similar situation existed with the majority group members.

The last question dealt with library use. The number of library visits seems to have some effect on learning, particularly on cognitive learning, with those who made more visits scoring higher on the factual sections. The reasons for these library visits appeared to have no effect on either form of learning. The post-test showed that there was a significant difference in attitudes towards the two ethnic groups studied between users of a variety of print media and users of only one or no print materials. Factual knowledge was not affected to the same extent. Here, the users of a variety of print media knew significantly more about American Indians than users of one type of print media or none at the .05 level, but not at the .01 level. An examination of pre- and post-test data concerning the use of nonprint materials revealed no significant differences.

V

INTERPRETATION

This study found no significant differences in cognitive and affective learning between those students using multimedia and those using textbooks in minority studies. The most obvious explanation for this lack of difference is that students will learn, regardless of the form of the media. If this situation is the case, then other individual factors, such as motivation, capacity, insight, and memory, may account for differences in learning. It is also possible that certain individuals respond to certain types of media and that there were differences which were individual, not group differences, implying that each person should be tested to discover the media form(s) that individual could most effectively use to learn. Yet another area which could account for this lack of difference is that of the research design. Although the instrument was carefully pre-tested, it still may have failed to measure differences. Perhaps the teachers and students, after a long history of reliance on print materials, were not as receptive to non-print materials as they might have been had they been exposed to these materials earlier in their academic careers. In addition, extensive exposure may have led to boredom on the part of students and, consequently, to less learning. It is interesting to note that two of the experimental group teachers commented in the concluding interviews that students had too much visual stimulation to respond to it. They felt the bombardment of non-print materials resulted in an "overkill" effect. As time advances, students, teachers, and librarians may learn how best to utilize non-print media. This learning may go hand-in-hand with the implementation of the inquiry method of learning.

The question dealing with the relationship of sex to learning reconfirmed the researchers' opinion that learning is not dependent on sex. Generally, boys learned about as much as girls, and there seems to be no reason to make any special instructional provision based on sex.

The thinking behind the third research question was the minority group members would know more about and have more favorable attitudes towards their own group and possibly other groups before the units began. It was also thought that they would be more highly motivated and, thus, would learn more than majority group members. Further, it was believed that some minority group members would respond to non-print materials more readily than majority members because these materials are generally less dependent on reading ability. Although there were some differences in their attitudes towards the groups studied, membership in an ethnic group seems to be the key factor, and not the materials used.

The last question sought to determine the effect of library use on learning. As might be expected, the number of library visits appeared related to cognitive learning, even though the reasons for the visits were not related to either cognitive or affective learning. An interesting finding was that using more than one type of print material tended to result in more favorable attitudes, a result that seems to reinforce the view that the students are more familiar with print materials and, thus, are more receptive to ideas presented in them. Use of non-print materials did not result in such an increase in favorable attitude.

The effective utilization of both print and non-print media is probably going to develop slowly. Students, teachers, and librarians will need time in which to create techniques that fully exploit the wide variety of available media. It would seem reasonable to suppose that individualized, creative inquiry will play an ever-increasing role in this exploitation. Such individualized learning cannot take place without appropriate materials, nor will the availability of materials alone assure their use. Both are essential.

During the concluding interviews, the librarian suggested ways of involving students and teachers in the exploration of media use. A concerted approach, given enough time, may well bring about significant change. Although the researchers, teachers, principal, and the librarian did not expect dramatic change in such a short period of time, they believed that there could be meaningful integration of media in classroom teaching. The effective use of the newer media, however, may not evolve for some time. If this projection is true, a study similar to this present one may be of future value.

APPENDIX A

DISTRIBUTION OF ETHNIC STUDIES MATERIALS

CATEGORIES	*NUMBER*	*COST*
Books:		
General	131	$ 749.25
Reference	6	14.53
Periodicals	1	20.50
Graphics	9	92.35
Sculpture	9	149.75
Slide sets	2	146.00
Filmstrips (sound)	20	1,183.24
16 mm film	37	7,681.78
Sound recordings	12	72.32
TOTALS	223	$10,109.72

APPENDIX B

QUESTIONNAIRE ADMINISTERED TO STUDENTS

QUESTIONNAIRE

Directions for completing this questionnaire:

A. Answer each question by placing an "X" in the blank in front of the response that best fits your situation. Some questions require that you make more than one response.

B. If a question seems difficult, please answer to the best of your ability.

C. Do NOT put your name on the questionnaire.

1. ..... Boy ..... Girl

2. Ethnic background: To which of these groups do you belong?

..... American Indian ..... Mexican-American

..... Asian American ..... White American

..... Black American

..... Other (please specify) .....

3. Have you ever extensively studied American Indians or Mexican-American on your own or in school?

..... Yes ..... No ..... Don't remember

If yes, when? .....

4. Please *estimate* how many times you have used the library in the last two months.

..... Never

..... 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 .....7 8

..... More than eight (please estimate) .....

.....Don't remember

IF YOU HAVE NEVER USED THE LIBRARY IN THE LAST TWO MONTHS, PLEASE SKIP QUESTIONS 5 THROUGH 8.

5. Please indicate the reasons why you have used the library in the last two months. (Check as many as apply.)

..... Came with a class to the library

..... Had to do an assignment in the library

..... Had free time and decided to use the library

..... Other reason (please specify) .....

.....

6. What type of materials have you used from the library in the last two months? (please check as many as apply.)

..... Newspapers
..... Books
..... Magazines
..... Vertical file materials
..... Maps
..... Cassettes
..... Records
..... Reel-to-reel tapes
..... Models
..... Overhead transparencies
..... Motion picture films
..... Filmstrips and/or slides
..... Videotapes
..... Other (please specify)
.....

7. Do you remember using any material on American Indians and/or Mexican-Americans from your school library?

..... Yes ..... No ..... Don't remember

8. If you have used the material on American Indians and/or Mexican-Americans, please indicate what led you to use these materials. (Check as many as apply.)

..... Used the materials in class

..... Used the materials in the library for a class assignment

..... A friend recommended the materials

..... Saw the materials displayed

..... Found the materials on the library shelf

..... Saw the materials listed in the library card catalog

..... Other (please specify) .....

HOW DO YOU FEEL ABOUT MEXICAN-AMERICANS AND AMERICAN INDIANS?

Directions: Place an "X" in the box which best represents how you feel about each item. There are NO right or wrong answers. Please respond to *all* items.

	strongly agree	agree	no opinion	disagree	strongly disagree
1. The American Indian ideal of not wasting any of the resources taken from nature, such as using all parts of the buffalo, should be adopted by Americans.					
2. American Indians should *NOT* be denied opportunities to learn their heritage in school.					
3. Mexican-American can *NOT* serve well in the government of the United States because they lack experience in self government.					
4. Mexican food, such as tacos and enchilladas, have contributed to the variety of American food.					
5. American Indians have become civilized because of their contact with White Americans.					
6. Art by Mexicans has little value in comparison to the works of artists in the United States.					
7. Language and cultural differences account almost entirely for the difficulties some Mexican-American and American Indian students have in school.					
8. The legal system has *NOT* insured adequate protection of the rights of Mexican-Americans.					
9. American Indians were poor fighters in the Indian wars with the United States Army.					
10. The only reason Mexican Americans are poor today is that they did *NOT* exercise their rights as American citizens to practice free enterprise.					
11. American Indian legends are an important part of the American tradition.					
12. Most Chicano organizations have as goals the achievement of justice and dignity for their people.					
13. American Indian languages are less complex and less expressive than the English language.					

	strongly agree	agree	no opinion	disagree	strongly disagree
14. Because the Indians of the Southwest never learned correct building methods, the Pueblos are inferior constructions.					
15. Mexican-Americans' strong family ties could serve as an example for many White American families.					
16. Mexican-Americans do *NOT* know how to care for property.					
17. American Indian tribal governments are more apt to provide for citizen needs than local governments of most White communities.					
18. American Indians should be sent away to school to help them forget their own culture.					
19. Migrant workers should be glad to receive the low pay they earn.					
20. The Spanish language has added rich and colorful place names to the Southwest.					
21. American Indians and Mexican-Americans have reason to be proud of their heritage.					
22. American Indian crafts are *NOT* worth preserving.					
23. American Indians have general bad health today because they are too lazy to take care of themshelves.					
24. If American Indians had the fortitude to refuse drink and stay sober, they would have retained their land.					
25. American Indians did *NOT* get a fair deal in their treaties with the United States government.					
26. Mexican-American soldiers fought bravely in World War II.					
27. The employer who wants a hard job done well should *NOT* hire a Mexican-American.					
28. Like most teenagers, Mexican-American youth have personal goals.					
29. Prior to White Man's coming, American Indians had practiced a responsive democratic government.					
30. Mexican-Americans are actively creative.					

WHAT DO YOU KNOW ABOUT MEXICAN-AMERICAN INDIANS?

Directions for answering the following questions concerning your knowledge of ethnic groups:

A. Please answer the questions to the best of your ability.

B. Please leave blank any questions which you cannot answer. DO NOT GUESS.

C. You will not be graded in any way for the answers which you give. Do NOT put your name on this paper.

D. All the questions will be concerning your knowledge of two groups: the Mexican-Americans and the American Indians.

Answer each question by placing an "X" in the blank in front of the response that best answers the questions.

MEXICAN-AMERICANS

1. In what part of the United States do most Mexican-Americans live at the present time?

..... Northwest ..... Northeast

..... Southwest ..... Southeast

2. In 1519 an army headed by Hernando Cortez conquered the Mexican empire of the Aztecs. The conquering army was from what country?

..... England ..... Spain

..... United States ..... France

3. John L. O'Sullivan, an editor of a United States newspaper in the 1840s, said it was the "manifest destiny" of the United States to take all the land between

..... the Atlantic Ocean and the Mississippi River.

..... the Rio Grande River and the Atlantic Ocean.

..... the Atlantic Ocean and the Pacific Ocean.

4. The Court of Land Claims was set up in New Mexico in 1891 to hear cases concerning land claims made by Mexican-Americans who had lost their land because they could not pay back loans made to them by Anglo-controlled banks. The Court made rulings that favored

..... owners of old land grants

..... Anglos

..... Mexican-American

5. Many Mexican-Americans move often today because they

..... are migrant workers.

..... make enough money to take long vacations.

..... search for good farms to buy.

6. What language must most Spanish-speaking Mexican-American children use to communicate with teachers and students in school?

..... English

..... Spanish

..... whatever language their parents use

7. A *barrio* is

..... a city neighborhood where Mexican-Americans live.

..... a Mexican-American official.

..... a Mexican-American organization.

8. Cesar Chavez led a strike in behalf of what kind of workers?

..... banana ..... grape ..... orange

9. Reis Tijerina demands that Mexican-Americans get back their

..... cities ..... land ..... animals

10. Match the following well-known Mexican-Americans and their professions by placing a letter in each blank.

..... Anthony Quinn and Ricardo Montalban	a. Golfer
..... Henry Ramirez	b. Tennis champion
..... Joe Kapp and Jim Plunkett	c. Actor
..... Vikki Carr and Trini Lopez	d. Treasurer of the United States
..... Pancho Gonzales	e. Professional football player
..... Lee Trevino	f. Politician – Chairman of the Cabinet Committee on Opportunities for Spanish-Speaking People
..... Romana A. Banuelos	g. Singer

Answer each question by placing and "X" in the blank in front of the response that best answers the question.

AMERICAN INDIANS

1. The first American Indians probably came from

   ..... Europe ..... South America ..... Africa ..... Asia

2. Early American Indians lived in

   ..... log houses ..... houses of clay bricks

   ..... tents ..... all of these

3. Indians have enriched the world through their

   ..... novels and plays

   ..... new kinds of building

   ..... farming

4. The chief reasons for fighting between white men and Indians was that

   ..... Indians had no religion.

   ..... Indians always broke peace treaties.

   ..... White men wanted Indian land.

5. Today most Indians in the United States are

   ..... among the poorest Americans.

   ..... members of the middle class.

   ..... richer than other minority groups.

6. The take-over of Wounded Knee, South Dakota, in 1973 by 200 armed Indians, resulted in

   ..... two deaths.

   ..... a 71-day occupation.

   ..... over 300 arrests.

   ..... government officials promising to study the protesters' complaints.

   ..... all of the above.

7. Who won the recent election for the Tribal Council Presidency of the Oglala Sioux?

..... Richard Wilson ..... Russell Means ..... Dennis Banks

8. Most Indians today attend what kind of schools?

..... public schools.

..... schools for Indian boys and girls run by the Bureau of Indian Affairs.

..... private schools.

9. Which of these statements is true concerning education for Indians living on reservations today?

..... Teachers are often educated off the reservations and return to teach.

..... Students are taught in Indian languages as well as in English.

..... More Indians today transfer to public schools from the reservation schools.

..... All of the above statements are true.

10. Match the contemporary Indian and his/her claim to fame by placing a letter in each blank.

..... Oswold White Bear Fredericks	a. Actress-singer
..... Wayne Newton	b. Athlete – track
..... Buffy Sainte-Marie	c. Commissioner of Indian Affairs
..... Jim Thorpe	d. Potter
..... Maria Martinez	e. Kansas Bureau of Investigation
..... George Blue Spruce	f. Singer
..... Louis R. Bruce	g. Artist
..... Ben Reifel	h. Dentist
..... Moses Jay	i. Congressman

APPENDIX C

INTERVIEWS FOR MINORITY STUDIES RESEARCH PROJECT

Asked of:	*Questions:*
Principal Librarian Teachers	1. What is your impression of the research project, generally speaking? Strengths? Weaknesses? Advantages?
Principal Librarian Teachers	2. Do you recall anything what might have influenced this study or its findings?
Librarian Teachers	3. Have the ethnic materials added to your collection influenced student learning? If so, how? Have students used these materials?
Teachers	4. Have these materials influenced your mode of teaching? If so, how?
Librarian Teachers	5. Did you observe any different practices in the use of library materials and services during project? What services do you and your students use? What constraints do you experience?
Principal Librarian Teachers	6. If we were to project, what recommendations would you offer to improve the whole operation?
Principal Librarian	7. How do you see the role of the school library in this school?
Principal	8. What is the purpose of the ethnic unit in the social studies curriculum and in the educational program of this school?

Comments Summarized:

When interviewed at the conclusion of the research project, the principal and the participating teachers commented on the research design, student and teacher use of the media, and the use of the library during the study.

The principal pointed out that while the researchers could not assume that the differences in teachers affected outcomes, neither could they discount these differences as a factor. Assigning each teacher involved to one control class and one experimental class might have altered outcomes. Scheduling had precluded such an arrangement,

however. The principal added that the four participating teachers seemed to be using the instructional modes most comfortable for them. In the follow-up interviews only the teacher of the control groups had felt constrained by his assigned mode, teaching with the text exclusively.

Both the librarian and two teachers of experimental sections mentioned the lack of teaching time as a major constraint. One teacher summed up the feeling: "We didn't have time for what we had to cover." The third teacher of experimental sections cited the forty-five minute class periods as the sole limitation. Only the teacher of control groups failed to mention a time constraint. Originally these teachers had planned a five-week classroom unit on minorities. After the unit was underway, they extended the duration to six-weeks. When the unit was completed, those in experimental classrooms felt the need for either longer class periods or more teaching days. It also seemed to her that materials in the visual arts, music, or the dance had been omitted. Students most often used books, sound filmstrips, vertical file materials, and radical periodicals, according to the librarian.

One teacher stated that previous to the research study she had used music as background for study, encouraging interested students to listen further outside class. This same teacher assigned book reports and allotted class time for individual reading of books about Indians. Another teacher expressed preference for sound filmstrips, especially for low groups. Addition materials on minorities, asserted this teacher, had "increased awareness," "expanded content," and "added color." They had also motivated the teacher. Previously the pattern in this instructor's classroom had been to assign a chapter-read-discuss. During the minorities research project, however, the text had served as an introduction. This teacher suggested that more biographies on current minority leaders would have been helpful. Still another teacher, one not confined to the text previous to the research project, noted student involvement with materials. Students had been encouraged to read a variety of books and to read in depth. The teacher did not designate specific titles, only the number of pages to be read. Because abundant materials were at hand, this teacher had done additional research.

The teacher of the control groups felt restricted when unable to reach some students with the newer media and when unable to reinforce learning. This teacher declared, "I could not supplement the text." The feeling of this instructor was that all students need audiovisual materials and some need them more. In the past, this teacher had shown filmstrips "as we cover material in class." However, one teacher of an experimental section stated that students were tired of AV. A second teacher echoed this sentiment: "The AV turned them off." Yet there was some agreement that generally good readers preferred books and that a variety of media increased effectiveness for poorer readers.

The teacher who "didn't get through all the filmstrips on Mexican-Americans" felt no need to show all the filmstrips to all the students in the future. Instead, groups of students could preview filmstrips for

the class as a whole. The problem seemed to be to incorporate the materials into the classroom unit. The librarian also had ideas about integrating a wider range of media into classroom units:

> Involve teachers in other disciplines who are at home teaching with materials in literature and the arts.
>
> Encourage individual students with interest in the arts to use literary and artistic materials.
>
> Allot specific class periods for teaching and learning with materials in literature and the arts.
>
> Provide in-service training in the integration of a wide range of media into units of study.
>
> Rely on access to a wide range of media coupled with teacher inventiveness gradually to evolve integrated multimedia units.

Attitudes of the teachers and the principal toward the added minority media, the school media center, and media center services were positive. The librarian reported that teachers had been enthusiastic about the added minority media and that they knew the library holdings as well as she did herself. The principal, according to the librarian, had been cooperative in buying the needed hardware. The library existed to serve the curriculum according to both the librarian and teachers interviewed. Three teachers saw the library as a "resource center" or as the "center of the school," and one of these commented on the "comfortable atmosphere – relaxed." All participating teachers were aware of numerous library services, mentioning especially AV materials which help to reach some students and vertical files of current and local material.

One teacher of experimental groups stated that 50-60% of the students had viewed filmstrips in the library during the research project. Evidently this was a newly initiated practice because students had reacted with surprise. This teacher believed that ideally there would be a librarian available to help each student. Another teacher of experimental classes felt that the difficulty in scheduling classes into the library had been a constraint – "Everyone wants to use the library." This teacher indicated that usually all of the class go to the library together. Individuals and groups using the library cause no problems, however, because, "They know what they are to do." Still another teacher of experimental class voiced a desire for more class time in the library, perhaps one-half to two-thirds of the total unit time.

The librarian realized that access to the library was restricted because only two classes could be scheduled at one time. Scheduling an entire class had been traditional at Central Junior High School.

Student behavior had posed no problem. She suggested that more individual and small-group visits could become a long-range goal. However, to help more students locate materials, another librarian should be added. At the present time, scheduled classes are given priority over individual users.

Two experimental group teachers reported favorably concerning trucks of materials assembled in the library for class use. They felt that this arrangement saved time and provided convenience. One of these teachers spoke of having had materials at one's fingertips and of checking materials to students from the classroom.

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